

### Abstract

The object of the present invention is to form a chromium-oxide film excellent in corrosion resistance without containing an oxide film of other metal onto the optional metallic material.

- 5 The chromium-oxide passivation film excellent in corrosion resistance without containing the oxide film of other metal can be formed inexpensively and in a short time, and a fluid supplying system for supplying fluid hard in corrosivity in safety is able to be provided. This invention comprises a step
- 10 of forming the passivation film consisting of a chromium oxide by giving heat treatment in an oxidizing atmosphere after coating chromium on metallic material of which surface roughness (Ra) of a coat surface is not more than 1.5 $\mu$ m.